

SECTION 4: CASE STUDIES ON EMS IN HOSPITALITY BUSINESSES

1. Turtle Island, Yasawas, Fiji

The 500-acre Turtle Island, also known as Nanuya Levu, is part of the Yasawa Island group, a chain of small islands located approximately fifty miles northwest of one of the two main Fiji islands, Viti Levu.

In 1972, Richard Evanson took over the over-grazed island and initiated an Intense reforestation programme: over the past 25 years, Evanson has focused on reviving the island's fragile ecosystem by planting more than a quarter of a million trees and encouraging wildlife to re-establish itself. The island is now a luxury resort complete with secluded private beaches and fifteen thatched, hand-built Fijian-style beachside cottages (bures), and is home to 160 local inhabitants.

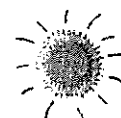
WATER

- While the quality of the water on the Island is good, the quantity is limited. Guests are encouraged to save water wherever possible by having short showers and by not requiring their towels to be washed every day;
- Each bure is fitted with water saving showerheads;
- The three-acre, organic vegetable and herb garden depends on a drip-feed watering system rather than a spray watering one, which minimises mid-air evaporation;
- Waste water is treated through an on-site treatment facility. The waste water is first pumped into septic tanks, where preliminary sedimentation takes place (heavy particles are allowed to sink to the bottom). Waste water is then introduced to grass-covered leach fields. Residue sediment is dried and used as fertilizer for forestry.



ENERGY

- Hot water is generated through solar hot water panels, situated on the roofs of all relevant buildings. Each bure has its own hot water panel, as does the kitchen, laundry and administration area;
- Outdoor photovoltaic lighting is used to light paths and walkways at night;
- All bures are fitted with low voltage lights;
- The drying room is heated by a co-generation unit which operates on waste heat generated by the resort's diesel generators. The drying room is located next to the diesel generator and receives warm air from the generator's radiator through a 60 centimetre square, sheet metal duct. The air escapes through the roof or the door at the end of the drying room, thereby preventing heat build-up. The drying room provides enough space to dry about 200 sheets at any one time. Harnessing this otherwise wasted energy is estimated to save AU\$5000 a year on energy costs.



WASTE

- Solid waste is separated into type – petroleum-based waste, metals, glass, plastics, organic kitchen waste and plant cuttings – at the time of disposal;



- Hazardous materials, such as batteries, are shipped to the mainland for recycling;
- All plant waste is fed into a high-powered chipper to create compost. This is stored in large heaps to enable bacteria to heat the compost and increase the rate at which it is converted to useful organic humus. This takes about seven months. The compost is then used as a soil enhancement in tree planting around the island and in the vegetable garden.

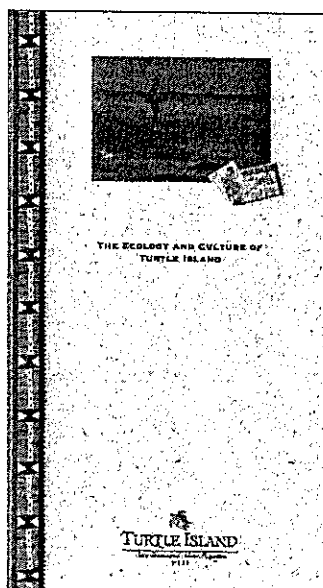
MONITORING

Turtle Island has commissioned a full Environmental Audit, which not only reports on what the Island is doing, but also makes recommendations as to how improvements can be made to environmental conduct. Regular updates to the original Audit act as benchmarks for assessing every new project undertaken, and many of the recommendations have now been implemented and absorbed into the daily life on the Island.

TRAINING AND MOTIVATING EMPLOYEES

- Environmental awareness programmes and training are constantly being developed to ensure that all staff understand the importance of their surroundings;
- Environmental meetings take place on a daily basis, and a scheme to award those staff who show the greatest initiative in regard to environmental conduct is currently being implemented.

COMMUNICATION



SEA TURTLES

Between the coral reef and shore lies the lagoon, a shallow but rich area of marine life. In the "Blue Lagoon" facing the western side of Turtle swim hawksbill turtles, green turtles and manta rays. The staff of Turtle Island pay local Fijian fishermen a fee for any sea turtles delivered live. The shell is then scratched by Turtle staff and so becomes valueless to poachers and souvenir seekers. (No harm is done to the turtles in this process; it is just cosmetic.) These endangered turtles then have more of a chance to survive. In deeper waters cruise coral trout, swift barracuda, wahoo, mahi mahi, dolphins, walu and the occasional pilot whale and billfish.

(Extract from brochure: "The Ecology and Culture of Turtle Island".)

- Guests are exposed to the Turtle's ecological activities even before setting foot on the Island through the resort's promotional material, and in most cases, arrive keen to learn more about their role in preserving the environment. Accordingly, they are offered a tour of the island's ecological zones and are encouraged to read the Environmental Audit, a copy of which is displayed in each bure.

COMMUNITY ACTION

- The Turtle Island Community Foundation, a trust fund that goes towards the health, education and transportation for the local population, has been established;
- In 1990, a healthcare foundation for those who otherwise would not have had access to modern medicines, was established. Each year since, Turtle Island has hosted an eye clinic. A dental clinic and dermatology clinic have been set up in the same way, and there are plans to extend the eye clinic to other South Pacific islands and even to construct a permanent, state of the art hospital on the island in 2001/2.



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2. The Orchid Hotel, Mumbai, India

DESIGN

The 245-room, five star, ECOTEL-certified Orchid Hotel was designed from the outset with preservation of the environment in mind. Amongst the environmentally-preferable building materials used were fertilizer waste⁵, bricks containing 60% fly ash (a waste product of the power generation process from coal fired power plants), redundant rubber wood⁶ or medium density fibre wood (MDF)⁷.

Windows are triple glazed which prevents the sun's heat from entering and helps to conserve energy generated from air-conditioning: The reflective outer glass reduces heat load by 15 percent. The atrium provides natural lighting to the reception and lobby.

WATER

- Flow restrictors, low-flow showerheads and aerators have been installed in all guestrooms. Aerators reduce water usage from 200 litres per shower to 110 litres per shower, by restricting water flow;
 - All rooms have been fitted with concealed cisterns which use only six litres of water per flush, as opposed to 15 – 20 litres used by conventional systems;
 - Taps in the back of house are on timers;
- These measures have collectively reduced annual water use from 782.6 litres per available room to 614.3 litres. Water savings as a result of using the aerators alone produce savings of US\$1,790 per year.

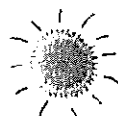
ENERGY

- Energy-efficient lamps are used, which provide as much light as ordinary bulbs, yet consume substantially less energy. A 10 Watt lamp is as bright as a 60 Watt incandescent bulb, yet the power consumption

⁵ The fertilizer waste is phospho gypsum from the phosphatic fertilizer plant.

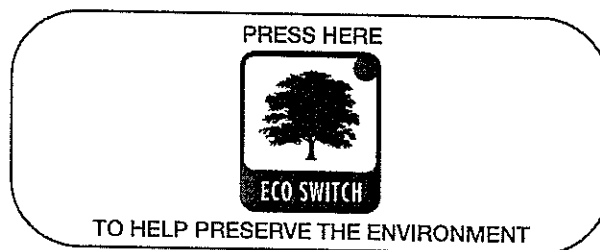
⁶ After producing rubber sap, the tree is cut down and cannot be used for any constructive purpose thereafter, as the wood from the rubber tree is soft. This rubber wood can, however, be processed using timber preservative chemicals to ensure dimensional stability, thereby allowing it to be used in construction.

⁷ MDF is manufactured using cotton stalks. The cotton tree is cut down after yield and rendered useless. However, through an advanced manufacturing process, the waste stalks can be chipped, sieved, washed and cooked to produce medium density fibre wood, which has all the features of natural wood.



of the lamp is only 25 percent of that of an ordinary bulb. Room lights only come on when a key card is inserted;

- Mini-bars in guest rooms save up to 40 percent energy as they are equipped with 'fuzzy logic' which senses the load inside the refrigerator and cools it accordingly;
- Photovoltaic lighting is used for lighting the outdoor terrace;
- A master control panel, incorporating a unique feature, known as the 'green button', is installed in each guest room. On pressing this button, the thermostat of the air-conditioning unit is turned up by 2 degrees. The saving in electricity resulting from this 2 degrees increase in temperature is converted into rupees and displayed on guest folio. This money is then used for funding NGOs and environment-related programmes on a long term basis. Additionally, a certificate is issued to the guest who has voluntarily participated in conserving energy, and they are later informed by direct mail of the hotel's ongoing environmental activities.



"Eco button" from bedroom Master Control Panel

Total savings per year in heat, light, power and guest amenities costs have reached US\$152,471. Energy savings per available room are now 10 – 15 percent.

WASTE



- Virtually all in-room products are reusable or recyclable. For example, hangers are made from recycled sawdust and items such as pens and tissue boxes are made from chlorine-free cardboard and fibre wood respectively;
- Paper usage is kept to a minimum: Laundry is returned in reusable cloth laundry bags, newspapers are delivered on request in reusable cane baskets and no 'Do Not Disturb' or 'Make Up the Room' signs are used;
- Kitchen waste is treated in on-site vermiculture pits, which breaks down waste into compost;
- Waste water generated from the hotel amounts to approximately 120 kl per day. 90 – 95 kl of grey water is recycled at the on-site wastewater treatment plant, 30 kl of which is then used for gardening and air-conditioning purposes.

Total savings in water purchasing costs per year have reached US\$13,440.

SUPPLIERS

- Preference is given to Indian-manufactured products and materials;
- Incoming packaging material has been reduced by 30%;
- Suppliers are regularly screened to ensure they fulfil the hotel's stringent environmental criteria;
- All suppliers must deliver goods in reusable and returnable crates;
- Suppliers are encouraged to offer their own innovative suggestions as to how packaging can be reduced.

**TRAINING AND MOTIVATING EMPLOYEES**

- Employees undergo a thorough environmental induction programme, with monthly refresher courses to ensure their conduct conforms to the hotel's eco-sensitive culture;
- Regular newsletters and site inspections also ensure staff are both informed of and behave according to the organisation's environmental policies.

**COMMUNICATION**

- Internal environmental performance is communicated to staff through internal e-mail and notice boards;
- Guests are kept informed of environmental activities through a direct mailing system;
- The hotel spreads its environmental message externally through newsletters, electronic media, the organisation of conferences and seminars and by regularly reporting to its certifying body, ECOTEL;
- Staff also participate in events like World Environment Day and World Anti-Smoking Day through activities such as 'clean up drive', 'no plastic bag' and 'pollution under control' campaigns.

**CONTRIBUTIONS TO THE LOCAL COMMUNITY**

- In addition to training 140 temporary trainees and 71 apprentices, the hotel has created 430 new job opportunities for Indians living in and around the city of Mumbai;
- Prior to The Orchid's opening, there were no local suppliers who manufactured or traded eco-friendly products. Today, the hotel's persistence in educating, informing and negotiating with suppliers has resulted in the development of a fully-fledged industry supplying such products. This has generated further job opportunities within the local community;
- The Orchid promotes local culture and crafts wherever possible. Many guest supplies, for example, are produced by the local cottage industry, which has created employment opportunities for local craftspeople.

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